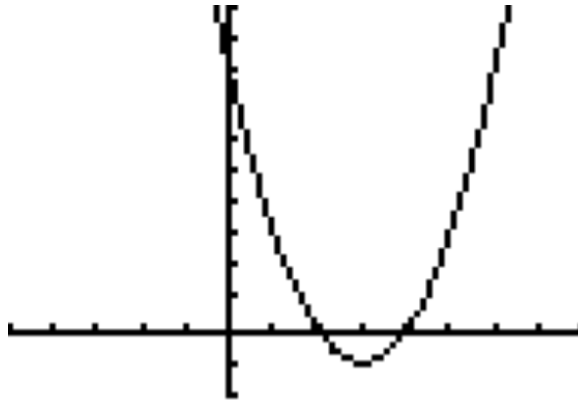


Station 1

Tell the vertex, starting point, and the roots for this graph.



Station 2: Answer the following questions using the interactive application on the SMARTboard. Refresh the page to get back to the original values.

- a.) What does the "a" number do to the graph?
- b.) What happens when "a" is negative?
- c.) What does "b" do to the graph?
- d.) What does "c" do the graph?

Station 2: Answer the following questions using the interactive application on the SMARTboard. Refresh the page to get back to the original values.

- a.) What does the "a" number do to the graph?**
- b.) What happens when "a" is negative?**
- c.) What does "b" do to the graph?**
- d.) What does "c" do the graph?**

Station 3

Graph the equation $y = x^2 - 3$ by making a table and plugging in x-values.

x	y
-2	
-1	
0	
1	
2	

Station 4

Graph the equation $y = x^2$ by making a table and plugging in x-values.

x	y
-2	
-1	
0	
1	
2	

Station 5

The equation is: $y = x^2 - 6x + 8$

a.) Find the value for $x = \frac{-b}{2a}$

b.) What is the vertex of the graph? (You found it at station 1)

c.) How do your answers to these questions compare?

Station 6: Use the graph to answer the questions.

A bottle-nosed dolphin jumps out of the water.

The path the dolphin travels can be modeled by

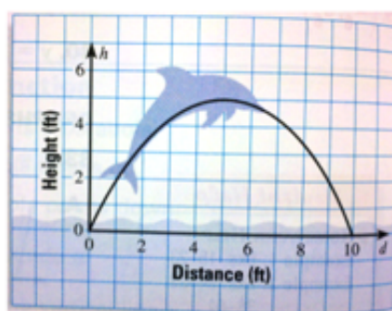
$$h = -0.2d^2 + 2d$$

where h represents the height of the dolphin and d represents horizontal distance.

A. What is the vertex of the parabola? (,)

B. Write your answer to part A as a sentence.

C. After how many feet did the dolphin go back in the water?



Station 7:

Graph $y = (x + 2)^2 - 3$ by filling in the table and plotting points.

x	y
-2	
-1	
0	
1	
2	

Station 8: Notes-Copy in the square.

**There are 2 forms of quadratic equations.
Follow the steps to graph each form.**

Standard Form

$$y = ax^2 + bx + c$$

$x = -b/(2a)$ is the vertex

c is the starting point

Vertex Form

$$y = (x - h)^2 + k$$

(h, k) is the vertex

1.) Find the vertex.
Put the value in the
middle of your table.

2.) Use the equation
to find the y-values in
your table.

3.) Plot the points
on the graph. It should
be a parabola.